To the HSE Dissertation Council
in Philology and Linguistics

Personal written reference
of the Dissertation Committee Member

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On the dissertation of Vardan Arutiunian

Vardan Arutiunian’s dissertation is dedicated to a very important problem: it analyzes linguistic deficits associated with Autism Spectrum Disorder (ASD). Three papers were selected for the defense. In all of them, Vardan Arutiunian is the first author, and they have all been published in the leading journals in the field of first language acquisition and developmental disorders.

Two papers (Arutiunian et al., 2021; Arutiunian et al., 2022) present different results of a very large scale study in which 82 children diagnosed with ASD and 25 typically developing children (a control group) passed various tests from the Russian Child Language Assessment Battery (known as Korablik battery in Russian). First of all, recruiting so many participants in a study of this type is a rare dramatic achievement. Secondly, this study is not only unique for Russian — existing studies on linguistic problems associated with ASD conducted on other languages focus mostly on preschool children, while in Arutiunian et al.’s study, participants were 7–11 years old. Finally, Arutiunian et al.’s study covers both production and processing on various linguistic levels: phonology, lexicon, morphosyntax, and discourse, which can hardly be found in any other study.

In Arutiunian et al. (2021), different linguistic skills in production and processing are compared. Some authors suggested that the expressive-better-than-receptive pattern is characteristic for ASD and can even be considered its unique hallmark, setting it apart from other developmental disorders. However, Arutiunian et al.’s study, as well as several others, demonstrated that this is not a universal characteristic of ASD.

Instead, Arutiunian et al.’s study revealed extensive variability in the ASD group, which shows convincingly the crucial importance of a large pool of participants. Different aspects of this variability are discussed in Arutiunian et al. (2021) and, in
more detail, in Arutiunian et al. (2022). Firstly, Arutiunian and colleagues found that language abilities in the ASD group were best predicted by non-verbal IQ of the participants, but did not depend on their age or the severity of autistic traits (the latter finding is novel and very important from both theoretical and practical perspective). However, there were still some participants with high non-verbal IQ and many linguistic problems and vice versa. Secondly, at every linguistic level (phonology, lexicon, morphosyntax, and discourse) there was a group of ASD participants whose language abilities were within the normal range, but the higher the level the smaller such group was. In total, this study demonstrates the importance of a formal language assessment of children with ASD, including all linguistic levels, to choose the most effective speech therapy program.

The third paper (Arutiunian & Lopukhina, 2020) studies the effects of phonological neighborhood density (PND) in word production and recognition, comparing Russian speaking 4-to-6 year old children and adults. Previous experiments on English and French demonstrated that a dense neighborhood facilitated word production but inhibited recognition whereas a sparse neighborhood inhibited production but facilitated recognition. However, a study on Spanish adults revealed the opposite pattern. The results obtained by Arutiunian and Lopukhina are in line with those from Spanish, both for adults and for children, although in the latter case, there are no significant differences in production (apparently, because the task is more difficult). This finding confirms the hypothesis formulated based on Spanish data: PND effects are not universal and depend on the morphological complexity of the language. Languages with more developed morphology, Spanish and Russian, pattern together, while English and French with relatively poor morphology demonstrate the opposite pattern.

In total, the studies collected in this dissertation meet the highest standards, and their value is beyond any questions. Unavoidably, they have certain limitations, but even these limitations are honestly listed in the discussion sections of the papers. However, as it is appropriate in journal articles, the defendant does not try to speculate about the bigger picture. Therefore, rather than raising critical questions, I would like to invite the defendant to go beyond the conclusions of the papers and share his thoughts about future research.

1. In Arutiunian et al. (2021) and especially Arutiunian et al. (2022), we see that children with ASD perform worse than the control group in all the tests used in the study. The more complex the test, the bigger the gap. This is a general observation that may potentially hide some important details. Based on your own experience and the knowledge of the literature, do you think that there are some domains which are particularly difficult for the participants with ASD (like, for example, irregular morphology, using pronouns, some syntactic constructions)?
2. Would these domains coincide or partly coincide with those which participants with SLI would find especially difficult? What can this potentially tell us about the comorbidity between SLI and ASD hypothesized by many authors? Based on what we know from studies on other languages, can we expect a qualitatively different pattern in other groups suffering from language development problems, such as children with Down syndrome, for example?

3. Finally, a small question. Although Arutiunian et al. (2021) and Arutiunian et al. (2022) mention relatively few specific problems experienced by children with ASD, they note that these children struggle with locative and instrumental cases. However, it remained unclear whether these problems were about producing the right forms or mastering particular functions of these cases, particular syntactic contexts in which they are required, or both?

These questions do not undermine the results of the dissertation, which makes an important contribution to the field. The dissertation satisfies and surpasses all formal requirements for the degree of Doctor of Philosophy in Philology and Linguistics. Vardan Arutiunian can be awarded the sought degree.

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